IN THE CLAIMS:

Claim 1 (Original): An intracellular-reaction measuring apparatus for measuring intracellular reactions by the use of a specimen in which a plurality of cell colonies are contained in a non-contact state; the apparatus comprising:

specifying means in which the intensity of first light emitted from the specimen in accordance with the presence of a stated protein is detected to specify, of the plurality of cell colonies, a noted colony containing cells where the stated protein is present; and

selection means in which the intensity of second light emitted from the specimen in accordance with the intracellular reactions is detected to select, of the detected intensity of the second light, the intensity of the second light emitted from the noted colony.

Claim 2 (Original): The intracellular-reaction measuring apparatus according to claim 1, which further comprises a chemical-substance introduction device for introducing into said cells chemical substances which target said protein.

Claim 3 (Original): The intracellular-reaction measuring apparatus according to claim 1, wherein;

said apparatus further comprises:

calculation means for calculating the proportion of cells where said protein is present, in regard to respective noted colonies specified by said specifying means; and

sorting means for sorting, of the noted colonies specified by said specifying means, a noted colony where said proportion is higher than a stated standard proportion; and

said selection means detecting the intensity of said second light to select, of the detected intensity of said second light, the intensity of said second light emitted from the noted colony sorted out by said sorting means.

Claim 4 (Original): The intracellular-reaction measuring apparatus according to claim 1, wherein;

said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted colony.

Claim 5 (Original): The intracellular-reaction measuring apparatus according to claim 2, wherein;

said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted colony; and

said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted colony, as the intensity of said second light.

Claim 6 (Original): The intracellular-reaction measuring apparatus according to claim 2, wherein;

said apparatus further comprises:

calculation means for calculating the proportion of cells where said protein is present, in regard to respective noted colonies specified by said specifying means; and

sorting means for sorting out, of the noted colonies specified by said specifying means, a noted colony where said proportion is higher than a stated standard proportion; and

said selection means detecting the intensity of said second light to select, of the detected intensity of said second light, the intensity of said second light emitted from the noted colony sorted out by said sorting means.

Claim 7 (Original): The intracellular-reaction measuring apparatus according to claim 2, wherein;

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detecting the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted colony.

Claim 8 (Original): The intracellular-reaction measuring apparatus according to claim 5, wherein;

said apparatus further comprises:

calculation means for calculating the proportion of cells where said protein is present, in regard to respective noted colonies specified by said specifying means; and

sorting means for sorting out, of the noted colonies specified by said specifying means, a noted colony where said proportion is higher than a stated standard proportion; and

said selection means detecting the intensity of said second light to select, of the detected intensity of said second light, the intensity of said second light emitted from the noted colony sorted out by said sorting means.

Claim 9 (Original): The intracellular-reaction measuring apparatus according to claim 8, wherein;

said calculation means further calculates the number of all cells in regard to respective noted colonies specified by said specifying means; and

said sorting means sorts out, of the noted colonies specified by said specifying means, a noted colony where said proportion is higher than a stated standard proportion and the number of all said cells is smaller than a stated standard number.

Claim 10 (Original): The intracellular-reaction measuring apparatus according to claim 9, wherein;

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detecting the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted colony.

Claim 11 (Original): An intracellular-reaction measuring apparatus for measuring intracellular reactions by the use of a specimen in which a plurality of cells stand adherent to one another; the apparatus comprising:

specifying means in which the intensity of first light emitted from the specimen in accordance with the presence of a stated protein is detected to specify a noted region having cells where the stated protein is present, in a higher proportion than a stated standard proportion; and

selection means in which the intensity of second light emitted from the specimen in accordance with intracellular reactions induced by the protein is detected to select, of the detected intensity of the second light, the intensity of the second light emitted from the noted region.

Claim 12 (Original): The intracellular-reaction measuring apparatus according to claim 11, which further comprises a chemical-substance introduction means for introducing into said cells chemical substances which target said protein.

Claim 13 (Original): The intracellular-reaction measuring apparatus according to claim 11, wherein;

said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.

Claim 14 (Original): The intracellular-reaction measuring apparatus according to claim 12, wherein;

said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted region; and

said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region, as the intensity of said second light.

Claim 15 (Original): The intracellular-reaction measuring apparatus according to claim 12, wherein;

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detects the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.

Claim 16 (Currently Amended): An intracellular-reaction measuring apparatus for measuring intracellular reactions by the use of a specimen in which a plurality of cells are contained; the apparatus comprising:

specifying means in which the intensity of first light emitted from the specimen in accordance with the presence of a stated protein is detected to specify[[,]] a noted region of said specimen, based on said first light ~~of the plurality of cells, a noted cell where the stated protein is present~~; and

selection means in which the intensity of second light emitted from the specimen in accordance with intracellular reactions induced by the protein is detected to select, of the detected intensity of the second light, the intensity of the second light emitted from said noted region ~~the noted cell~~.

Claim 17 (Original): The intracellular-reaction measuring apparatus according to claim 16, which further comprises a chemical-substance introduction means for introducing into said cells chemical substances which target said protein.

Claim 18 (Original): The intracellular-reaction measuring apparatus according to claim 16, wherein;

said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted cell.

Claim 19 (Original): The intracellular-reaction measuring apparatus according to claim 17, wherein;

said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted cell; and

said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted cell, as the intensity of said second light.

Claim 20 (Original): The intracellular-reaction measuring apparatus according to claim 17, wherein;

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detects the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted cell.

Claim 21 (Original): An intracellular-reaction measuring method for measuring intracellular reactions caused by chemical substances, by the use of a specimen in which a plurality of cell colonies are contained in a non-contact state; the method comprising:

a preparation step in which a specimen is prepared by incorporating into a cell a gene of a protein serving as a target of the chemical substances and a gene of a fluorescent protein, culturing the cell, and thereafter incorporating a fluorescent probe for measuring intracellular reactions;

a specifying step in which the intensity of first fluorescence emitted from the fluorescent protein having been expressed together with the target protein is detected to specify, of the plurality of cell colonies, a noted colony containing cells where the target protein is present; and

a selection step in which the intensity of second fluorescence emitted from the fluorescent probe is detected to select, of the detected intensity of the second fluorescence, the intensity of the second fluorescence emitted from the noted colony.

Claim 22 (Original): An intracellular-reaction measuring method for measuring intracellular reactions caused by chemical substances, by the use of a specimen in which a plurality of cells stand adherent to one another; the method comprising:

a preparation step in which a specimen is prepared by incorporating into a cell a gene of a protein serving as a target of the chemical substances and a gene of a fluorescent protein, culturing the cell, and thereafter incorporating a fluorescent probe for measuring intracellular reactions;

a specifying step in which the intensity of first fluorescence emitted from the fluorescent protein having been expressed together with the target protein is detected to specify a target region having cells where the target protein is present, in a higher proportion than a stated standard proportion; and

a selection step in which the intensity of second fluorescence emitted from the fluorescent probe is detected to select, of the detected intensity of the second fluorescence, the intensity of the second fluorescence emitted from the noted region.

Claim 23 (Original): An intracellular-reaction measuring method for measuring intracellular reactions caused by chemical substances, by the use of a specimen in which a plurality of cells are contained; the method comprising:

a preparation step in which a specimen is prepared by incorporating into a cell a gene of a protein serving as a target of the chemical substances and a gene of a fluorescent protein, culturing the cell, and thereafter incorporating a fluorescent probe for measuring intracellular reactions;

a specifying step in which the intensity of first fluorescence emitted from the fluorescent protein having been expressed together with the target protein is detected to specify, of the plurality of cells, a noted cell where the target protein is present; and

a selection step in which the intensity of second fluorescence emitted from the fluorescent probe is detected to select, of the detected intensity of the second fluorescence, the intensity of the second fluorescence emitted from the noted cell.

Claim 24 (New): The intracellular-reaction measuring apparatus according to claim 16, wherein

said specifying means specifies, as said noted region, a noted cell where the stated protein is present.

Claim 25 (New): The intracellular-reaction measuring apparatus according to claim 16, wherein

said specimen has a plurality of cells which stand adherent to one another; and

said specifying means specifies, as the noted region, a region having cells where the stated protein is present, in a higher proportion than a stated standard proportion.

Claim 26 (New): The intracellular-reaction measuring apparatus according to claim 25, further comprising:

a chemical-substance introduction means for introducing into said cells chemical substances which target said protein.

Claim 27 (New): The intracellular-reaction measuring apparatus according to claim 25, wherein

said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.

Claim 28 (New): The intracellular-reaction measuring apparatus according to claim 26, wherein

said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted region; and

said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted form said noted region, as the intensity of said second light.

Claim 29 (New): The intracellular-reaction measuring apparatus according to claim 26, wherein

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detects the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.

Claim 30 (New): The intracellular-reaction measuring apparatus according to claim 16, wherein

said plurality of cells are contained in the specimen as a plurality of cell colonies in a non-contact state; and

said specifying means specifies, as the noted region, a cell colony containing cell where the stated protein is present.

Claim 31 (New): The intracellular-reaction measuring apparatus according to claim 30, further comprises a chemical-substance introduction device for introducing into said cells chemical substances which target said protein.

Claim 32 (New): The intracellular-reaction measuring apparatus according to claim 30, wherein

said apparatus further comprises:

calculation means for calculating the proportion of cells where said protein is present, in regard to respective noted regions specified by said specifying means; and

sorting means for sorting, of the noted regions specified by said specifying means, a noted region where said proportion is higher than a stated standard proportion; and

said selection means detecting the intensity of said second light to select, of the detected intensity of said second light, the intensity of said second light emitted from the noted region sorted out by said sorting means.

Claim 33 (New): The intracellular-reaction measuring apparatus according to claim 30, wherein

said selection means detects the intensity of said second light at intervals of a constant time to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.

Claim 34 (New): The intracellular-reaction measuring apparatus according to claim 31, wherein

said specifying means detects as the intensity of said first light the intensity of first light emitted from a fluorescent protein expressed together with said protein, to specify said noted region; and

said selection means detects the intensity of second light emitted from a fluorescent probe for measuring intracellular reactions, introduced into said specimen, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region, as the intensity of said second light.

Claim 35 (New): The intracellular-reaction measuring apparatus according to claim 31, wherein

said apparatus further comprises:

calculation means for calculating the proportion of cells where said protein is present, in regard to respective noted regions specified by said specifying means;

sorting means for sorting out, of the noted regions specified by said specifying

means, a noted colony where said proportion is higher than a stated standard proportion; and

said selection means detecting the intensity of said second light to select, of the detected intensity of said second light, the intensity of said second light emitted from the noted colony sorted out by said sorting means.

Claim 36 (New): The intracellular-reaction measuring apparatus according to claim 31, wherein

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detecting the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.

Claim 37 (New): The intracellular-reaction measuring apparatus according to claim 34, wherein

said apparatus further comprises:

calculation means for calculating the proportion of cells where said protein is present, in regard to respective noted regions specified by said specifying means;

sorting means for sorting out, of the noted regions specified by said specifying means, a noted colony where said proportion is higher than a stated standard proportion; and

said selection means detecting the intensity of said second light to select, of the detected intensity of said second light, the intensity of said second light emitted from the noted colony sorted out by said sorting means.

Claim 38 (New): The intracellular-reaction measuring apparatus according to claim 37, wherein

said calculation means further calculates the number of all cells in regard to respective noted regions specified by said specifying means; and

said sorting means sorts out, of the noted regions specified by said specifying means, a noted region where said proportion is higher than a stated standard proportion and the number of cells is smaller than a stated standard number.

Claim 39 (New): The intracellular-reaction measuring apparatus according to claim 38, wherein

said apparatus further comprises:

detection means for detecting the timing at which said chemical substances are introduced into said specimen; and

said selection means detecting the intensity of said second light at least twice, before said chemical substances are introduced and after a certain time after said chemical substances have been introduced, to select, of the detected intensity of said second light, the intensity of said second light emitted from said noted region.